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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,223	11/02/2001	Kai-Kuang Ma	675/9-1495	2694

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EXAMINER

PHILIPPE, GIMS S

ART UNIT PAPER NUMBER

2613

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/007,223

Applicant(s)

MA, KAI-KUANG

Examiner

Gims S. Philippe

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/2/02.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This is a first action in response to an election requirement in which the applicant elects claims 1-15 for prosecution and withdraws claims 16-38. Since that applicant has not indicated that the claims were withdrawn with traverse, **the election is considered final, and claims 16-38 must be canceled from the application.**

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

For example, claims 1-2, and 5-7 are not properly punctuated.

In addition, claim 1, lines 16, the phrase "optionally, global motion vector computed" is grammatically incorrect.

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5. Claim 1 recites the limitation " to adapt to application requirements and system requirement procedure modes " in line 6-7. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation " the most promising search center for the remaining local search" in lines 12-13. There is insufficient antecedent basis for this limitation in the claim.

Claim 1, calls for "adaptive rood pattern" and fixed rood-arm length". These expressions as claimed by the applicant are not expressed as terms of art in the field of motion estimation for video frames.

Claim 2 recites the limitation " the profiles as are selected from a group of profiles " in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. The applicant should note that the phrases between parenthesis are not considered as part of the claim. Appropriate correction is required.

Claim 3 recites the limitation "in the associate figures" in lines 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 3, calls for "furthermore, the pattern ...". The limitation appears to be a literal translation from a foreign document.

6. Regarding claim 3, the phrase "could be used for " renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "could be"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim 8 recites the limitation " the pre-determined application requirements and system's processing modes" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation " city-block length" in line 1, and "maximum of the city-blocks length" in line 2. There is insufficient antecedent basis for these limitations in the claim.

Regarding claim 12, the phrase "can be chosen " renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "can be"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claims 2-15 are considered rejected by dependency to claim 1.

NOTE: Since the claims are indefinite as written, they will be examined as best understood by the Examiner.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kok (US Patent no. 6363117) in view of Ju (US Patent no. 5801778).

Regarding claim 1, Kok discloses a scalable fast block-matching motion estimation method for analyzing a plurality of video games comprising employing search pattern scalability and/or search distance computing scalability in order to adapt to application requirements and system's processing modes (See Kok col. 1, lines 47-64, col. 3, lines 40-47) ; employing different search patterns designed for non-interlaced video; employing different search patterns designed for interlaced video (See Kok col. 4, lines 45-54); performing an initial search for each macroblock in high-motion video and quality-demanded video applications, in order to find the most promising search center for the remaining local search, by utilizing either adaptive rood pattern with a fixed rood-arm length adaptively determined or motion adaptive pattern, both based on available neighboring motion vectors from the spatial and/or temporal domains as well as (See col. 4, lines 30-67, and col. 5, lines 1-11).

It is noted that Kok is silent about performing local and global motion vector activity as specified in claim 1.

However, Ju discloses performing local and global motion and local motion vector activity for each macroblock (See Ju col. 4, lines 64-67, col. 5, lines 1-9).

Therefore, it is considered obvious that one skilled in the art at the time of the invention would recognize the advantage of modifying Kok by incorporating Ju's local and global motion vector search for the same purpose of locating small and irregular movement of a particular object in a frame as well as finding the motion involving many or most objects of a given image as taught by Ju (See Ju col. 5, lines 7-9 and col. 6, lines 15-17).

As per claims 2-15, the combination of Kok and Ju is considered disclosing the limitations of the claims. In addition, since most of the claims are indefinite, all of the limitations are considered met unless an amendment overcoming the 112 rejection, and also distinguishing the claimed invention from the prior art, is presented.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rodriguez et al. (US Patent no. 6195389) teaches motion estimation system and method.

Sun (US Patent no. 6014181) teaches adaptive step-size motion estimation based on statistical sum of absolute differences.

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Racket (US Patent no. 6567469) teaches motion estimation algorithm suitable for H.261 videoconferencing applications.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gims S. Philippe whose telephone number is (571) 272-7336. The examiner can normally be reached on M-F (9:30-7:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris S. Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Gims S Philippe
Primary Examiner
Art Unit 2613

GSP

June 18, 2005